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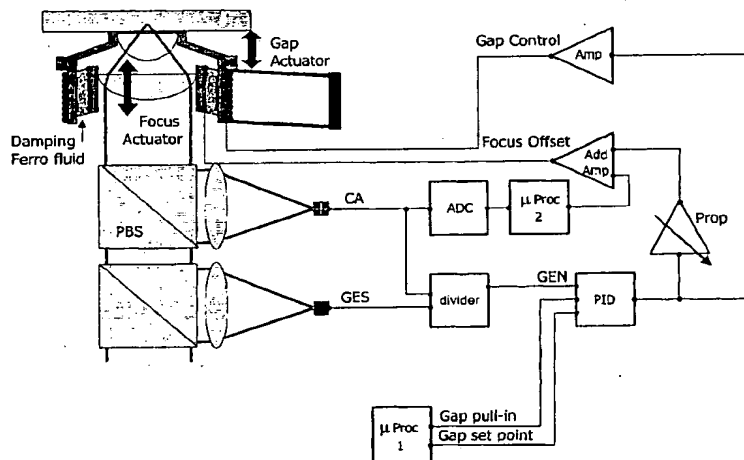
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(54) Title: **OPTICAL DATA STORAGE SYSTEM AND METHOD OF OPTICAL RECORDING AND/OR READING**



(57) Abstract: An optical data storage system for recording and/or reading, using a radiation beam having a wavelength  $\lambda$  is described. The radiation beam is focused onto a data storage layer of an optical data storage medium. The medium has a cover layer that is transparent to the focused radiation beam. The cover layer has a thickness  $h$  smaller than  $5 \mu\text{m}$ . A cover layer with thickness variation of substantially less than the focal depth, i.e.  $50 \text{ nm}$ , eliminates the need of dynamic focus control of the objective which is otherwise required in addition to the gap servo. Further a method of optical recording is described using such an optical data storage system by which a static focus control and spherical aberration correction to accommodate medium-to-medium variance is achieved. The static focus control can be realised by optimising the modulation depth of a known signal, e.g. from a lead-in track.

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